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Attorney's Docket No.: 17023-002US1 / N5-50

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-22 (Cancelled)

23. (Previously presented) The mutant endotoxin made according to the method of claim 35, wherein the mutant endotoxin is purified from the mutant non-typeable *Haemophilus influenzae* by phenol-water extraction or by protease digestion.

24. (Previously presented) The mutant endotoxin according to claim 23, wherein the mutant endotoxin is conjugated to a carrier protein.

25. (Previously presented) The mutant endotoxin made according to the method of claim 35.

26. (Previously presented) The mutant endotoxin according to claim 25, wherein the mutant endotoxin is conjugated to a carrier protein.

Claims 27-34 (Cancelled)

35. (Previously presented) A method of making a mutant endotoxin comprising mutating *htrB* gene within a wild-type non-typeable *Haemophilus influenzae*, wherein the *htrB* mutation produces a mutant non-typeable *Haemophilus influenzae* having a mutant endotoxin containing a decreased phosphoethanolamine content and an increased hexose content in the mutant endotoxin's inner core, and a pentaacylated or tetraacylated lipid A lacking one or two secondary acyl chains compared to the corresponding wild-type non-typeable *Haemophilus influenzae* hexaacylated endotoxin,

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and wherein the mutant endotoxin has substantially reduced toxicity as compared to the hexaacylated endotoxin of the wild-type non-typeable *Haemophilus influenzae*; and purifying the mutant endotoxin.

36. (Previously presented) A method for producing antisera containing antibodies specific to a mutant endotoxin from an *htrB* mutant non-typeable *Haemophilus influenzae*, the method comprising

(a) immunizing an individual with a formulation comprising: (1) an *htrB* mutant non-typeable *Haemophilus influenzae* having a mutant endotoxin, (2) the mutant endotoxin, or (3) the mutant endotoxin conjugated to a carrier protein, wherein the mutant endotoxin contains a decreased phosphoethanolamine content and an increased hexose content in the mutant endotoxin's inner core, and a pentaacylated or tetraacylated lipid A lacking one or two secondary acyl chains compared to the corresponding wild-type non-typeable *Haemophilus influenzae* hexaacylated endotoxin, and wherein the mutant endotoxin has substantially reduced toxicity as compared to the wild-type non-typeable *Haemophilus influenzae* hexaacylated endotoxin; and

(b) collecting the antisera containing the antibodies from the immunized individual.